

A Debate
— ON —
**Should Vivisection
be Abolished?**

BETWEEN
Walter R. Hadwen, Esq.,
J.P., M.D., L.R.C.P., M.R.C.S., etc.,
AND
Thomas Eastham, Esq.,
M.B., Ch.B.

HELD IN THE
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ON
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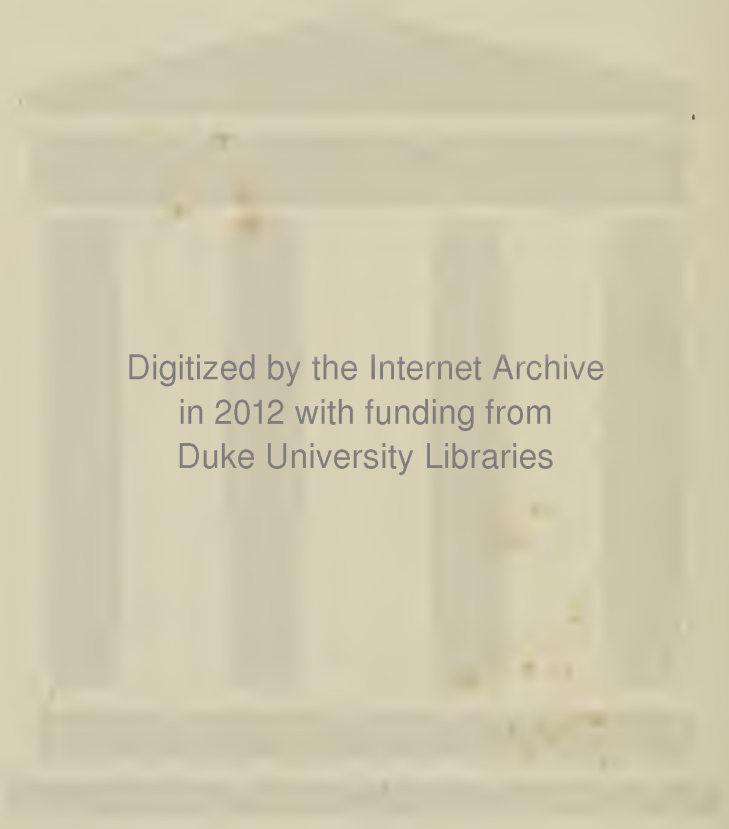
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PREFACE.

THE debate, the report of which follows, was the result of circumstances which I will briefly detail.

On April 15, 1907, an anti-vivisection meeting was held in Glossop under the auspices of the Manchester Anti-Vivisection Society. The subject was new to the people, and probably unattractive. Only thirty-seven persons assembled, although the chair was taken by the Mayor; and of these thirty-seven a certain proportion were the friends of two local doctors—Dr. Eastham and Dr. Ollerenshaw, who attended in order to oppose their opinions to those of the lecturer, Mr. J. H. Reed. Both doctors obtained permission to speak, and delivered addresses in favour of vivisection. One of the local newspapers, "The Glossop Chronicle," reported the proceedings under the heading "Medical Opposition Carried the Meeting."

Having had some experience of the readiness of certain medical men to pit their "expert knowledge" against lay speakers, while shirking conflict with fellow medical men who take an opposite view to their own, I took the opportunity to write to Drs. Eastham and Ollerenshaw and ask them if they would publicly debate the question with a doctor; if so, the British Union for the Abolition of Vivisection would be prepared to pay all expenses. I received a reply signed by both doctors to the effect that they were willing to debate, but wished to lay down their own terms. These terms included the stipulation that "all the costs of the debate (including the travelling and out-of-pocket expenses of the speakers) should be paid IN ADVANCE by my society." The Committee of the British Union, having undertaken to pay all the ordinary expenses, naturally refused to blindly make themselves responsible for the personal expenses of their opponents (which, for all they knew, might reach an unreasonable figure). After some correspondence on this point, Dr. Ollerenshaw dropped out of the negotiations, it appearing that he had obtained an appointment in London (though living at Glossop), occasioning a demand for £3 for his travelling expenses. Dr. Eastham remained, and he finally agreed to debate on equal terms, after a futile struggle to maintain the condition that Dr. Hadwen should speak only once, which would have prevented his answering the arguments advanced by the other side.

The remaining conditions proposed by Dr. Eastham, to which the British Union immediately agreed, were as follows :—

1. The debate to be held in the Victoria Hall, Glossop (the largest available).
- 2 The debate to be well advertised by posters, handbills and advertisements in the local papers.
- 3 A neutral chairman to preside.
4. The meeting to be free, and with no collection.
- 5 All expenses to be paid by the British Union.
- 6 The result of the poll to be well advertised.

Our opponent having finally agreed to our contention that there should be three speeches on each side of equal length, the only choice of a possible advantage to be gained by either was that of beginning or ending the debate; and this choice was left to Dr. Eastham. He decided to have the last word.

On the evening of July 18 the Victoria Hall was crowded with an audience of about 2,000, and one more orderly, attentive, and intelligent, or more representative of all classes, was probably never gathered together to hear this great question discussed. The result of the poll (an overwhelming majority in favour of the abolition of vivisection) was no less a surprise to us than it must have been to the gentleman whose correspondence had been marked by such a tone of confidence, and who had been so desirous that it should be "well advertised." Glossop is altogether new ground to the British Union. The small previous effort of our Manchester allies had "fallen flat." Those among the huge audience known to be anti-vivisectionists numbered less than half-a-dozen. Dr. Hadwen came as a stranger, while his opponent was a native of the town. Our work had consisted merely in ordering the distribution of notices of the meeting; we had asked for no support, nor had we made any effort to convert the inhabitants of Glossop to our views; whereas our opponent, being on the spot, had had every opportunity of gaining a following beforehand. As a "test case," proving that the uninitiated public can appreciate our arguments when only they can be induced to listen to them, the Glossop debate stands unique in anti-vivisection annals, and we may hope that it marks an era in the awakening of the public to the fact that the question which forms its title must be faced by intelligent men and women of the twentieth century.

The following debate is re-published from the local press.

BEATRICE E. KIDD,

Secretary, B.U.A.V.

SHOULD VIVISECTION BE ABOLISHED?

THE CHAIRMAN'S SPEECH.

WITHOUT any preamble the Chairman at once proceeded to the business of the evening. "When doctors disagree," he said, "who shall decide?" In this case it was the audience that was to decide. He took it that the two gentlemen present were both sincere and conscientious in the opinions they were propagating, and under these circumstances there ought not to be any personalities—(hear, hear)—or base imputations. What was wanted was a fair and square hearing of this vexed question. (Hear, hear.) They did not want each gentleman to vivisect the other's personality. (Hear, hear, and laughter.) There was a duty for the audience to perform. During the speeches the audience might approve or disapprove in the usual form of "hear, hear," or "no, no," but he would not like there to be any other interjections. He hoped they would all listen calmly and dispassionately to the debate, and give the speakers

EVERY POSSIBLE CHANCE,

as interruptions often caused a speaker to lose the thread of the argument. Personally, he was quite impartial. It was the first time he had occupied a position of this kind, but he would endeavour to preside to the best of his ability. The time conditions were: First round, 30 minutes each speaker; second round, 20 minutes each; and third round, 10 minutes each. He had a statement to make from Miss Beatrice Kidd, the secretary to the British Union for the Abolition of Vivisection, and it was to the effect that she was not responsible for any literature that had been sent into the district.

She wished to be perfectly impartial, and did not want the audience to think that she had been spreading literature for the sake of propagating her own side. The first to take part in the debate was Dr. Hadwen, who would take the affirmative of the subject. (Applause.)

DR. HADWEN.

Dr. Hadwen had a cordial reception, and said he would like, in the first place, to express his satisfaction that the newspaper war carried on in the local press had had the happy result of obtaining Dr. Eastham's consent to publicly debate the important question embodied in the resolution before the meeting, "Should Vivisection be abolished?" The indefatigable Secretary of the British Union for the Abolition of Vivisection, Miss Beatrice Kidd, had had no object in view from the first but a fair and open debate between medical men upon absolutely equal terms, and that must be apparent to everyone who had followed the correspondence. (Applause.) The only choice of advantage that there could be in the matter was as to which of them should begin and end the debate. That point Miss Kidd left entirely to Dr. Eastham, and he had elected to have the last word. He thought it best to briefly state

HIS POSITION,

and to answer the arguments advanced by Dr. Eastham and Dr. Ollerenshaw upon the occasion when they opposed a lay Anti-Vivisection lecturer in the town, a circumstance of which that debate was the outcome.

Under the name of Vivisection was now included not only cutting operations, but all scientific experiments upon living animals, such as placing animals in vessels and slowly raising the temperature to inordinate heat; starving them for days together and then, perhaps, compelling them to work in that condition; suffocating and partial drowning; inoculating them with all manner of diseases and poisonous substances; putting irritating substances into their eyes, which after weeks of agony become slowly blinded; pouring boiling water down the throats of dogs, holding their paws over

spirit lamps, crushing their most delicate organs, and many other revolting experiments. All that was done in the name of science with a view to obtaining knowledge calculated to relieve or cure human diseases. But although unparalleled cruelty had been practised upon sentient and sensitive creatures unable to defend themselves against their more powerful tyrants, for some 3,000 or 4,000 years, there had not, so far as he knew, resulted any relief or cure of any human malady or disease which might be attributed to those repulsive investigations. That certain facts might have been gleaned from them he did not doubt; one important fact was, that there was no discovery which had been made by one vivisector but had been denied by another, but there was certainly no useful knowledge that he was acquainted with, alleged to have been gleaned from vivisection, but could have been obtained, and had been obtained, equally well by other means. He was aware that medical men generally held an opposite view, but it must be remembered that the majority of medical men had never studied the subject and knew literally nothing about it.

THE PRACTICE OF VIVISECTION

was solely in the hands of 200 or 300 licensed men, many of whom were not medical men at all. Their experiments were published for the most part in very expensive journals, which medical men, as a rule, never saw; and the general public were deluded into the belief that no suffering whatever existed, but that the blessed word "anæsthetic" covered all question of pain. That the practice was a most serious one was proved by the fact that two Royal Commissions had been appointed to inquire into it within the last thirty years; that a special Act of Parliament had been passed to control it; that no one but a licensee was permitted to vivisect in licensed premises under the supervision of a Home Office inspector, and a description of the investigation had to be furnished in each case. But the Act of Parliament was a delusive one. It laid down certain important restrictions in the first part, and then granted certificates in the second part by which all the restrictions but three were absolutely withdrawn, and the animal was

LEFT TO THE MERCY

of the vivisector. The only duty of the inspector was to see that the ordinary regulations were complied with. That anæsthetics were used in the experiments there was no question, but as to how far they relieved the animals from pain was another matter. Vivisectional anæsthesia was one thing ; surgical anæsthesia was quite another. Nothing but the most extreme care and attention could succeed in putting a dog fully under the influence of an anæsthetic, and in keeping it under without killing it. They were usually given an injection of morphia, which was not an anæsthetic, and which only tended to stupify them and destroy their power of resistance, and then an anæsthetic was administered up to a certain point, and continued to be administered automatically by an apparatus—an altogether different method from that employed in the case of a human patient. In numerous instances, deep anæsthesia would destroy the effect of the experiment, consequently "incomplete anæsthesia" was candidly confessed in many of the reports. In some reports of severe experiments morphia only was used, and was even called an anæsthetic by some vivisectors, although no surgeon would dare to perform a major operation upon a human subject under its influence, and he maintained that what they would not dare to do in the case of a human subject they had no right to do for a dog. (Applause.) Again, a drug called curare was also frequently used, which paralysed the muscular system ; and the animal had to have an opening made in its windpipe in order

TO KEEP IT ALIVE

by an artificial breathing apparatus, so that it was quite incapable of making a movement or uttering a cry, and yet was perfectly sensitive to pain. Even if an anæsthetic were used under such circumstances, it was impossible to tell how far the animal was anæsthetised, because the morphia or the curare had rendered it incapable of expression or resistance. In the case of morphia some eminent authorities asserted it increased an animal's sensibility. But the most crushing testimony to the uncertainty of insensibility of pain

was contained in the fact that the Home Office authorities had ceased to divide experiments into "painful" and "painless" in their reports, and the chief Home Office Inspector recently confessed to the Royal Commission that they "could never distinguish exactly which experiments were painless and which were painful, and the experimenters and observers themselves could not distinguish, in a very large number of cases." But even if the animal were properly anæsthetised during the cutting operation, there is the long drawn out agony during the watching process, where the animal is allowed to linger on after its body has been mutilated in various ways; in addition there are thousands of instances where diseases of all descriptions are allowed to slowly germinate in animals' bodies—some of them of the most revolting character. Apart from the

USELESSNESS OF VIVISECTION

and its torture, he maintained that it was unscientific. They could never be certain that a result obtained in an animal would apply to a human being. Professor Starling, a notorious vivisector, told the Royal Commission a few weeks ago that "the final experiment must be on man." Why, then, were animals submitted to all that torture for such a grave uncertainty? The fact that animals could not speak destroyed all hope of knowing anything about their symptoms, which were the most important means of obtaining correct information. Turning to alleged discoveries, he came to the arguments used by Dr. Ollerenshaw and Dr. Eastham when they opposed Mr. Reed at a small meeting in Glossop two or three months since. Dr. Ollerenshaw expressed his surprise that so little opposition was shown to anti-vivisection speakers who travelled about the country "armed to the teeth with uncorroborated statements and sentimental platitudes." Proceeding to give a few examples of experiments and of the valuable knowledge they had gained by them, Dr. Ollerenshaw's first statement was, "the cause of the terrible disease popularly known as consumption is a microbe." Even if that were the case, it could only be by the microscope that the tubercle bacillus could

be discovered and not by experiments on animals; but because certain germs were found in certain diseases, it did not prove that they had caused that disease. The Chief Veterinary Officer of the Local Government Board recently acknowledged before the Royal Commission that he could not say positively that the bacilli found in milk were tubercle bacilli; a similar bacillus was found in the flanks of cows, in human beings, in manure and cowsheds, and abundantly in hay and grass. At that rate, agriculturists ought to be all decimated by consumption, whereas they are particularly free from it.

Dr. Ollerenshaw's next argument was that "until a few years ago surgeons did not dare to operate with a view to removing a kidney affected by such disease, it was thought to be too great a risk, and it was not until Professor Rose Bradford's experiments on dogs that surgeons began to remove the diseased organ." As a matter of fact the operation for removal of the kidney was one of the most ancient, and was performed in the time of Hippocrates, who lived 400 years before Christ. (Laughter.) It was also done on criminals by Italian surgeons in the seventeenth century. Therefore

THE CRUEL EXPERIMENTS

of Dr. Rose Bradford in 1896 were quite unnecessary; and yet Dr. Ollerenshaw said: "Such a great stride in the treatment of this awful condition could not positively have been made had vivisection been prohibited!" It had been done in that country forty years before Dr. Rose Bradford tortured any fox-terrier at all. Dr. Ollerenshaw went on to describe the alleged discovery of chloroform by Sir James Simpson by means of experiments on six rabbits, upon the recommendation of Dr. Lyon Playfair, and he added, "But for the use of these animals chloroform might never have been discovered." But that was a pure fairy tale. Chloroform had been already discovered by Liebig in his chemical laboratory fifteen years before Dr. Simpson made any experiment.

THOSE EXPERIMENTS WERE FIRST MADE

upon himself and his friends Drs. Keith and Duncan, who

(II)

all became insensible, and shortly afterwards chloroform was given to a boy who was about to undergo an operation at the Infirmary. Dr. Lyon Playfair was nowhere near the place. No experiments on animals were ever made in connection with the discovery of chloroform or its anæsthetic properties. Dr. Ollerenshaw then proceeded to enlarge on brain surgery and the mapping out of the brain into motor areas by Ferrier through experiments of the most terrible character on monkeys. He extolled it as "wonderful research" by which a surgeon, as he says, "could put his finger on the patient's head and say under that spot exactly lies the area of irritation." No surgeon with a reputation to lose would ever dare to make such a statement upon the strength of experiments upon monkeys' brains. Ferrier himself said, "Nor do the facts of experimental physiology seem so consistent with themselves or with the undoubted facts of clinical research as to inspire us with unhesitating confidence as to their accuracy or as to their applicability to human pathology."

THE CONTRADICTIONS

among physiologists upon that branch of research were notorious, and it was these very contradictions that first roused him to study the subject of vivisection, and which finally led him to see that it was a totally untrustworthy method of research. These centres of the brain in man had been mapped out as the result of long and careful study upon human subjects.

TUMOURS OF THE BRAIN

by pressing upon certain parts had produced certain results which had been carefully examined after death, and the precise spots where the mischief lay had been identified. By a succession of such cases over long years, absolutely certain results had been obtained without any need of the torture of monkeys, whose brains were so different from man's that they formed no certain guide for localisation. That was admitted not only by Ferrier but by Charcot, the great French authority on brain surgery. Had they vivisected

the brains of all the animals in creation they could never have discovered the centre for speech. And if they could discover a delicate centre like that without vivisection, surely vivisection was unnecessary to discover the coarser centres of muscular movement.

Dr. Ollerenshaw concluded by saying that they owed to experiments on animals the knowledge of decompression in the treatment of "caisson disease." Why, it was known long ago that divers brought up rapidly from a great depth were apt to suffer from pains and even paralysis, and that if thrust back and brought up slowly those symptoms were avoided. He himself wrote an article in a public paper in which he referred to that fact more than five years ago, and yet Dr. Ollerenshaw informed them the knowledge of how to prevent diver's paralysis was discovered by physiological experiments on dogs and cats last year by Dr. Leonard Hill! As a matter of fact slow decompression by means of a medical air lock was practised in making the Blackwall Tunnel as long ago as 1897. Thus it would be seen that the medical gentleman who talked about "uncorroborated statements and sentimental platitudes" of anti-vivisectionists made a series of assertions not one of which would stand the test of five minutes' investigation. (Laughter and applause.)

DR. EASTHAM FOLLOWED

Dr. Ollerenshaw in defence of the weird practice of Vivisection, saying that this was a scientific subject and demanded "scientific thought," and proceeded to give an instance of the value of vivisection culled from law reports. He said a woman was charged before a coroner's jury with having poisoned her child; she simply used arsenic ointment on the child's head to cure infection. The jury did not believe her, as the medical expert found arsenic in the child's stomach. She was found guilty of wilful murder. But vivisection was resorted to, and Dr. Eastham announced, amid applause, that rabbits anointed with arsenic died, and arsenic was subsequently found in their stomachs, so the woman was acquitted. He had sought all through the law reports for that case but could not find it. There was a case which bore some relation to it, how-

ever, the very earliest case he could find, and it was reported in Taylor's Medical Jurisprudence. The case occurred in 1864. The girl was aged nine years. The mother had rubbed into her diseased head white precipitate ointment mixed with arsenic. The child died on the tenth day. The stomach was found upon post-mortem examination, inflamed, and arsenic was found in the mucous fluids. A portion of the diseased scalp was examined and yielded arsenic in large proportion. The report concludes: "From the evidence given at the inquest there was no doubt the mother's account was correct, and that her child had died from an ignorant application of arsenic externally to a diseased portion of the scalp." There was no verdict of wilful murder, and therefore no vivisection, and he could only conclude that Dr. Eastham had been misinformed, for it had been known from time immemorial that arsenic or other poisons rubbed into open wounds permeated the system.

The only other argument of Dr. Eastham was that anti-toxin had cured diphtheria, and the death rate had been reduced in hospitals from forty-six to twelve per cent.

THAT WAS THE LAST DITCH OF THE PRO-VIVISECTORS.

That the death rate in hospitals had been reduced he admitted, but he would ask Dr. Eastham to explain how it was that whilst the fatality had been reduced in hospitals, the mortality from diphtheria as compared with the living population according to the Registrar General's returns had gone up? The death rate in England and Wales for the ten years subsequent to the introduction of anti-toxin was 235 per million, whereas it was only 200 per million in the ten years before anti-toxin was known. That did not look much like a "cure." Whilst, however, he viewed scientific experiments upon living animals as cruel, unnecessary, unscientific and misleading, he would say that even had it been justified by proved success in aiding the alleviation or the cure of human diseases, he would still look upon vivisection as unjustifiable upon moral grounds. Animals had rights, and they had no right to exploit them in this way for their own selfish ends.

IN DAYS GONE BY

it was customary to extort from helpless prisoners, by means of torture, secrets which otherwise could not be obtained. What was done in those days in the name of politics and religion was done in these days in the name of science. An increased sense of human rights and justice, as well as of pity for the helpless and oppressed, had caused such torture to be looked upon as immoral, and they made the same claim for the poor and oppressed in the animal creation.

THE RIGHTEOUS INDIGNATION

of a nation swept away the slave traffic and the black man or woman came to be looked upon as a fellow-creature who had a claim upon the sympathy of a Christian state. Look at that dog—as loyal, as affectionate as, perhaps more so than, any human being; he had saved their lives a thousand times, he would lick the hand of the man who struck him his death-blow, and they allowed that noble creature, that trusts them so implicitly, to be cut and carved alive, and tortured in inconceivable ways in order to discover secrets for their benefit—for the benefit of a creature inferior to it in many noble traits. It was a cowardly science, it was contrary to the whole tenor and spirit of Christian love and sympathy, and without hesitation he said it ought to be abolished. (Loud applause.)

DR. EASTHAM.

Dr. Eastham was greeted with applause on rising to respond. He asked first of all, What right had they to kill the animals which could not speak for themselves that they might satisfy their desire for food? As they saw, Dr. Ollerenshaw was not there that night, against whom Dr. Hadwen had spoken the most. He (the speaker) had come in for very little. He was only caught on the rabbits. (Laughter.) His authority for that statement was the Blue Book of the Royal Commission in 1875. Before that Commission Dr. Alfred Swaine Taylor gave evidence, and said that "the return of a verdict of wilful murder by the coroner's jury against a woman charged with poisoning her step-child was prevented only by means of specially instituted experiments on rabbits, showing it to be possible that a person could get arsenic in the stomach by applying arsenic ointment to the head to cure ringworm." Therefore, his authority was nothing more nor less than the Government Blue Book, pages 55 and 56, and question I,162. Dr. Hadwen had described to them the experiments in a most emotional manner. He did not blame him for being emotional. It was his business sometimes to go into Court, but he was only emotional when it paid him. (Some little disorder was caused in the room.) Continuing, Dr. Eastham said he had to

APPEAL TO SENSE

that night, and it was absolutely necessary to speak to facts. Referring to the use of the drug curare, he remarked that Dr. Hadwen had stated it was in daily use, but he (the speaker) quoted the statements of three professors at different colleges, one of whom said the use of the drug was given up long ago, and another that in twelve months only four cases were treated with this drug. At Oxford curare was given to seven frogs, but they were previously deprived of their brains so that they would not feel anything. They would have no sensation; and it was also given to one rabbit and given in ether. He was not going to say that it was pleasant to experiment on these animals. Dr.

Eastham then proceeded to deal somewhat with the history of experiments.

ONE OF THE FIRST EXPERIMENTS

made upon animals was an experiment made by a man called Galen, who wanted to find out what was inside the arteries and their action during life. It was not a big experiment, but he just mentioned it because it was a piece of interesting history, and at that time the physicians and doctors thought that inside the arteries they had the breath of life, whilst inside the veins they had blood. Galen cut down and opened an artery, and tied one end and tied the other a little distance from it. He then opened the artery and found it contained blood. Well, it was a simple, straightforward experiment that prevented any further theories being brought out, and showed conclusively that inside the artery during life there was blood. In 1628, Dr. Harvey wanted to find out the working of the heart and the circulation of the blood. With great diligence, and by frequent investigation upon divers animals, he found out what he desired. Now, how were they to find out the working of the heart and the circulation of the blood if they only examined corpses? How were they going to find it out unless they examined animals? It was absolutely essential to know about the heart, and no scientific medical gentleman would endeavour to treat a patient with the heart disease if he did not know the working of the heart. Let them take another view of the question. These experiments were done to try and find

THE ACTION OF DRUGS

on living tissues. In the good old days, they used gold and amber and pearls, and anything that was costly, with which to treat disease. Then these experiments came in. If they took any ordinary text book, they would see described the action of the drug on the various parts of the body, and all that had been brought about by experiments on animals. Angina pectoris was a very dangerous disease of the heart. Some time ago Sir Thomas Lauder Brunton had a patient suffering from this disease. He found that during the attacks the pulse became quicker, the blood pressure

increased and the arteries contracted. It seemed probable that the great rise in tension was the cause of the pain, and it occurred to the physician he had named that if it were possible to diminish the tension it would be possible to allay the disease. Sir Lauder Brunton said: "I knew from

UNPUBLISHED EXPERIMENTS

upon animals by Dr. A. Gangee that nitrite of amyl had this power, and therefore I tried it upon the patient. My expectations were perfectly answered, and at the same time the pulse became slower, much fuller, and the tension diminished." That was the scientific treatment of the disease, and it was by a drug that had been used upon animals. And it acted upon animals just as it acted upon man, in spite of what Dr. Hadwen might say to the contrary, and it was tried upon man and proved successful. If they took Taylor's text book on medicine, they would find that the treatment for angina pectoris was amyl nitrite, and that treatment was discovered as a result of experiments on animals. He was going to ask Dr. Hadwen if he would use that drug.

Dr. Hadwen: Yes.

Dr. Eastham said he was going to take advantage of those experiments on animals. A man who denounced experiments on animals, and yet used them, was very much like a man who denounced slavery and yet made his living by it. The speaker then went on to refer to the extraction of digitalis from foxgloves. It was found that this drug varied very much in its intensity, and in order to equalise it there was only one thing to do, and that was to make the chemist standardise it, which was done by experimenting on animals. There was another drug, ergot, which was used by medical men in maternity cases in very critical times, and when it was used it must act promptly, but it was found in some instances that it was not up to the required standard. Fancy a medical man going out to a critical case and requiring the use of this drug, and then finding it was no better than water. It ought to be tested beforehand on some animal, and then it could be tested on the higher animal, man or woman. (Applause.)

DR. HADWEN'S SECOND SPEECH.

THE ARGUMENTS NOT MET.

Dr. Hadwen said he thought they would agree with him that Dr. Eastham had not attempted to meet any of the arguments he brought forward. The only thing that was left for him to do was to answer Dr. Eastham. (Hear, hear, and applause.) In the first place they were asked what right had they to kill animals for food. He could not be held guilty of that, because for the last thirty years he had been a vegetarian. (Loud laughter and applause.) Another thing, there was a difference between killing animals for food, and torturing them and keeping them under torture. As to the question of

RABBITS AND ARSENIC,

he himself had quoted Dr. Taylor, and in that case the jury decided, without experimenting upon animals, that there was no case of wilful murder. What Taylor did after he did not know. As to the drug curare Dr. Eastham had completely given his case away, because one of the letters stated that it had been "given up," which showed that it had been used. Another professor admitted having given it in four cases, and so on. One said he "could not get any," which showed that he had been trying. He (Dr. Hadwen) had written a pamphlet called "Some Recent Vivisections in English Laboratories," which anybody could get by applying for it at the office of the British Union, 32 Charing Cross, London, in which he had collected from the vivisectors' own books many cases in which curare was given. He did not mean to suggest that it was used daily, and he had not used that expression, but it had certainly not been given up. The question of a medical man who experimented being conscientious had nothing to do with the case at all. He declaimed against any medical man having a conscience torturing the poor creatures in order to get something out of their torture for man's benefit. An argument had been adduced that Galen found the arteries did not contain air, but blood.

GALEN NEED NOT HAVE TORTURED

a poor sensitive creature, for he could have cut his own skin and found it out in two minutes. He did not know of anything more fallacious than the arguments Dr. Eastham brought forward. There was scarcely any drug they could be positive about by drawing an analogy between an animal and a human being. With reference to the statement as to the circulation of the blood, it would be a total impossibility to discover it by cutting into the living. It was not discovered until some ten years after Harvey, when Malpighi invented the microscope, and saw for the first time the delicate capillary vessels that completed the junction of the arterial and venous systems, which anyone could see to-day by examining the web of a frog's foot. Dr. Eastham had spoken of vivisection as being useful to discover the action of drugs upon living tissue. He supposed a grain of morphia might send anyone in that room into the next world. But they could give a pigeon twelve grains, and it would be as merry as a cricket on the hearth. They could give rabbits belladonna, goats hemlock, and they would not be any the worse, and goats could eat and chew tobacco like cabbage leaves without feeling any ill effects. Prussic acid could be given to horses with almost impunity, and yet a grain would kill off an elephant. The action of strychnine upon two species of monkeys was dissimilar. Whereas they could give it to one without any fear a small dose to another would be fatal. It was one of the worst arguments which he could have brought forward, because the testing of drugs on animals was one of the most fallacious of ideas. Now he came to

THE STATEMENT

that he was prepared to use nitrite of amyl for angina pectoris, but he maintained that it was not discovered by means of experiments upon animals. Long before Sir Lauder Brunton used it Sir Benjamin Ward Richardson introduced nitrite of amyl into this country, and he discovered it by experimenting on himself. (Applause.) His exact words were: "I proceeded in the usual

way. I made myself the first victim, and I tried the effect by taking it both in the form of vapour and of fluid." Coming to the question of digitalis, Dr. Hadwen stated that he had given a good deal of it in his time and also a good deal of ergot, but he had never troubled to get the specially standardised preparations. He had never gone to manufacturing chemists for their standardised drugs, because he knew the whole thing was nothing but

ABSOLUTE HUMBUG.

Professor Cushny might perhaps be a very good authority upon drugs as judged by the laboratory standpoint, but if he had to do with patients by the bedside he would perhaps have more modified views upon the subject. They could not possibly be certain of definite results, because just as it was in human beings scarcely two animals were alike. Dr. Hadwen proceeded at some length to explain how Dr. Harvey had discovered the circulation of the blood. It could not have been discovered by vivisection, but even if it had been that was no reason why if those experiments were performed in the barbarous days of long ago, they should be continued in the advanced civilisation of the present day. (Applause.) Therefore, supposing great discoveries had been made by vivisection in days gone by, there was

NO REASON WHATEVER

why they should answer the question that would be put to the meeting in any other way than in the affirmative. Now with regard to the question of the great point that Pro-Vivisectors raised, the value of brain surgery. The whole idea of vivisection as regarded brain surgery was absolutely fallacious, and the two great backbones of vivisection—the circulation of the blood and brain surgery—seeing that his arguments had not been met, must now go. There could be but one conclusion and that was that this cruel and iniquitous practice ought to be swept away from a Christian and civilised country. (Applause.)

DR. EASTHAM'S REJOINDER.

Dr. Eastham said the opinions he gave the audience a little while ago were not his own opinions. He simply gave the opinion of Dr. Cushny with reference to drugs. Dr. Hadwen told them that Dr. Harvey worked these experiments out on paper and thought them out. He (the speaker) knew that he thought them out. Scientists did think their experiments out, and then by means of experiments they ascertained whether their thoughts were correct. (Applause.) Dr. Hadwen flatly denied it—well, the audience could please themselves whether they would agree with Dr. Hadwen or Professor Cushny. Was vivisection unscientific? The Council of the Royal Society were all unanimously in favour of vivisection. That showed whether it was unscientific or not, for the Royal Society was the highest distinction to which any scientist could attain. And yet Dr. Hadwen told them it was unscientific. Were they going to follow the opinions of Dr. Hadwen or of the Royal Society? Dr. Eastham then went on to tell the audience

WHAT VIVISECTION HAD DONE

to prevent the spread of infectious diseases by means of inoculating animals with the micro-organisms, and studying their effect. The statistics of the death-rate with reference to diphtheria had been quoted by Dr. Hadwen, but they were of very little use for this subject, because the Registrar-General took the percentage of the deaths upon the whole of the population, whereas they ought to be taken of the cases which were treated. (Applause.) Referring to the value and preparation of anti-toxin for cases of diphtheria, the speaker stated that he wrote to his old teacher, Dr. Goodall, medical superintendent of the Eastern Fever Hospital, Homerton, one of the largest fever hospitals under the management of the Metropolitan Asylums Board. He replied: "With regard to the anti-toxin serum treatment of diphtheria, I have had a most extensive ex-

perience of this disease both before and after the introduction of the anti-toxin treatment, and there is no question in my mind as to its value. I should consider myself a criminal if I knowingly withheld it in a case of diphtheria, except of the very mildest nature in an adult." Dr. Eastham gave further statistics showing how experiments and inoculation had greatly decreased cases of cholera, lockjaw, &c., and stated that these discoveries would not have been made had it not been for experiments upon animals (Applause.)

THE THIRD ROUND.

In reply Dr. Hadwen said he had been asked to give the name of a single eminent surgeon of the present day who agreed with him in his views upon vivisection. He could assure them that no man who held his views would be looked upon as being eminent at all; it was a question of what was right and what was wrong. (Hear, hear.) It was

NOT A QUESTION OF MINORITIES OR MAJORITIES,

but of who was right and who was wrong. Dr. Eastham had told them that the whole of the Royal Society, composed largely of medical men, were dead against him (Dr. Hadwen.) It was not more than sixty years ago that a young man tramped the streets of London in order to get his life insured. There was not one medical referee who would insure that young man at ordinary rates because he was a teetotaler. The medical profession were unanimously against him, they did not believe a man's life was worth insuring unless he took alcohol; so he set to work to form an insurance society of his own. Two or three years ago that young man took the chair at the jubilee meeting of the United Kingdom Temperance and General Providence Association. That was proof that a large number of scientific men might be unanimously wrong, and that a single individual might be right. (Applause.) Their friend had referred to infectious diseases, but had not attempted to substantiate his statements.

HE WOULD CHALLENGE

Dr. Eastham to prove the existence of a single specific microbe for a single specific disease. There was not a single infectious disease at the present day of which a specific microbe had been definitely proved to be the cause. Again and again witnesses had come up before the Royal Commission recently, again and again they had been cross-examined on this point, and not one had been able to prove a single specific microbe as the origin of a

single specific disease. If therefore they could not find a specific microbe for a single disease (and the whole of serumtherapy rested on that theory), it followed that the practice was devoid of scientific foundation. As to the claim on behalf of cholera serum, it was a fact that Dr. Koch was the first to discover the cholera bacillus. Dr. Klein laughed at it, and took a whole tubeful of the bacilli in order to show his contempt for the discovery, and was living to-day to tell the tale. (Applause.) With regard to lockjaw, they had evidence of that before the Royal Commission. Mr. Stockman, the chief veterinary officer for the Board of Agriculture, stated that he could not say that tetanus serum was of much value as a curative agent. As a curative agent it was practically given up. Now with regard to the case fatality of diphtheria, they had been given evidence of London hospitals. He would also furnish evidence. In the North-Western London Hospital belonging to the Metropolitan Asylums Board, as stated in their report for 1904, out of 530 cases of diphtheria admitted, 172 were treated without anti-toxin, and they all recovered, and of the remaining 358 treated with anti-toxin 42 died. He would give them the official report for the whole of the hospitals under the jurisdiction of the Board. 5,422 cases of diphtheria were admitted. Of these 4,839 were treated with anti-toxin, and 10 per cent. died, and of 583 cases treated without anti-toxin, only one per cent. ended fatally. But the reason why hospital statistics frequently show a great decrease in fatality since the introduction of anti-toxin is easily explained. Under the new regime of notification and the administration of anti-toxin at the very earliest onset of the alleged disease, ordinary ulcerative sore throats that

THEIR GRANDMOTHERS

would have cured in four-and-twenty hours were now labelled "diphtheritic," the patients were hurried into the hospital and given anti-toxin, which, quoting very wickedly against his own profession, really meant "half-crown sore throats." (Laughter.)

The number of cases—mostly harmless—was increased by this method; the increase of cases since anti-toxin had been introduced was enormous; and thus the fatality was brought down whilst the mortality was going up. In Hull the death-rate before anti-toxin was introduced was only '09 per thousand. At its introduction it rose to '11. The year following it went up to '17, and in 1901 it was '15. The Hull Corporation became alarmed, and in order to check the death toll they decided in 1901 to supply anti-toxin free to the medical practitioners in the city. The result in 1902 was that the diphtheria death-rate more than doubled and went up to '34. In 1903 it was '30 per thousand; in 1905 it stood at '27, and last year it actually rose to '51.

THE AVERAGE DEATH-RATE

in Hull from diphtheria for the five years it was supplied by the Corporation was more than four times greater than during the five years immediately preceding its introduction, when anti-toxin was unknown. Instead of anti-toxin reducing the death-rate, it seemed to have increased the death-rate. And yet by juggling with cases and case mortality the authorities had actually shown a decline in the diphtheria fatality although the death-rate was all the time going up! No fewer than 13 different diseases had been attributed to the introduction of anti-toxin. If they wanted to improve the health of the community, let them get rid of back-to-back houses, let them have pure water and a proper system of drainage, and inculcate healthier conditions among the people. If they had a healthy body they had the finest resistance against disease they could possess. They would never prevent disease by giving disease, and pumping into the human system every kind of excrecence from an animal's body in a diseased condition, in the hope of preventing diseases to which it bore no analogy. (Applause.)

THE FINAL REPLY.

Dr. Eastham said that in the last speech they had had back-to-back houses, healthy houses, filth, insurance, and temperance, and he asked them, what on earth had they got to do with the question at all, except to appeal to their emotions? Let them get down to the solid issue, that was, should vivisection be abolished? Dr. Hadwen had quoted the death-rate figures of diphtheria, but the case mortality figures showed how fallacious his arguments were. Dr. Hadwen had spoken about half-crown sore throats, but before the introduction of this serum treatment the case death-rate in what were known as tracheotomy cases was much higher than after. Before the introduction 70 per cent. of the patients died. Now, if they would take the percentage in the same class of cases since the introduction, instead of being 70 per cent., it was only 31. Were they going to back up their opinions with the authorities, and go in for scientific treatment, or were they going to vote for Dr. Hadwen, against every eminent physician and surgeon in the land? Professor Sims Woodhead, Sir Frederick Treves, the Royal Society, and the President of the Royal College of Physicians (Sir Douglas Powell) were all against Dr. Hadwen. Sir Douglas Powell, who appeared before the Royal Commission on March 5th, 1907, was asked: "Can you give us the name of any leading member of the College of Physicians who holds a different opinion, and thinks that animal experimentation either is wrong or leads to erroneous results?" The answer given before the Royal Commission was, "No; I really cannot. I do not know of anyone." That meant there was not a man of any eminence against vivisection. (Applause.)

Dr. Eastham then went on to state that the anti-vivisectionists had claimed Sir Frederick Treves as one of themselves, and that Sir Frederick had complained that his words had been wrested from their context and used in support of anti-vivisection, whilst Sir Frederick Treves himself has been claimed as an anti-vivisectionist. At the conclusion of Dr.

Eastham's speech Dr. Hadwen rose on a point of order to deny this, and the Chairman signified that an explanation could be given if Dr. Eastham were again allowed to reply. Dr. Hadwen then denied emphatically that Sir Frederick had ever been described as an anti-vivisectionist, and challenged Dr. Eastham to show such a statement in any anti-vivisection publication. He proceeded to quote Sir Frederick Treves' words, which were in their very nature quite independent of any context, and which anti-vivisectionists felt were all the stronger as coming from a believer in vivisection: "Many years ago I carried out on the Continent sundry operations upon the intestines of dogs, but such are the differences between the human and the canine bowel that when I came to operate upon man I found I was much hampered by my new experience, that I had everything to unlearn, and that my experiments had done little but unfit me to deal with the human intestine."

Dr. Eastham, in reply, referred to the publication from which he had taken the quotation (which turned out to be a report of one of Dr. Hadwen's own speeches) and asked, if it were not intended to convey the impression that Sir Frederick Treves was an anti-vivisector, why was it quoted at all? (Cries of "No, no!")

At the conclusion of the speeches, the Chairman put it to the meeting whether the audience were in favour of the abolition of vivisection or not. The result was to be determined by a show of hands, and by an overwhelming majority testified to its disapproval of the practice of vivisection.

On the motion of Dr. Hadwen, seconded by Dr. Eastham, a vote of thanks was accorded to the Deputy-Mayor (Councillor T. Braddock) for presiding.

The British Union for the Abolition of Vivisection.

(The British Anti-Vivisection Society.)

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